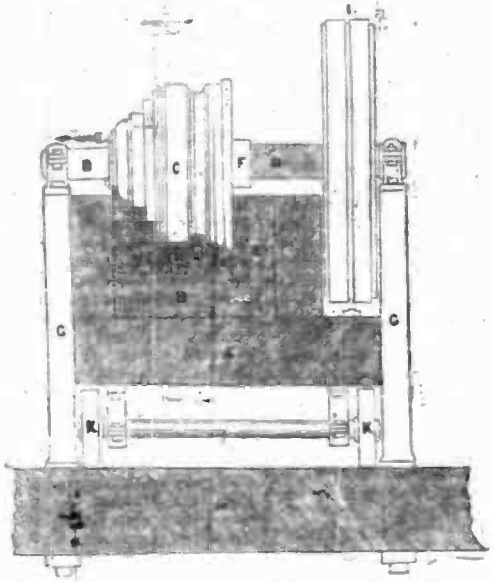
ARCHITECTURAL MODELLING.—THE PAPYRUS POWDER.

TO THE EDITOR.

SIR,—Since I wrote to you on the subject of architectural modelling, it has occurred to me that a drawing of the apparatus, such as I had intended to use for that purpose, would be acceptable to many of your readers. It is of simple construction, and may be made in any place where there is a lathe and carpenter's bench.

Figure 1, in the accompanying drawing, which is

Fig. 1.



the full size for a column one inch in diameter, shews the moulding trough (A), made of any hard wood, and B B are loose fillets of wood which will be used of different sizes, according to the space required to be filled up betwixt the sides of the trough and the moulding-wheel (C). The moulding-wheel may be in one piece, the whole height of an entablature, or it may be in three pieces, namely, the cornice, frieze, and architrave; it may be still further subdivided, for the purpose of introducing enriched mouldings. The several parts slip on to the spindle (D), and are screwed up tight against the pin (E) by means of the nut (F). The two wrought-iron uprights (G G) are bolted down upon the moulding bench (H) the one on the left slides in the direction of the arrow, a slit being made in the bench for that purpose. The pulley (I), has the ends of two leather straps made fast to it, the other ends being secured to the moulding trough; by turning the winch it was not necessary to shew (which in the plan) the trough is made to move backwards and forwards as the moulding-wheel revolves in it. The moulding-trough runs upon wheels (K K), one pair being placed at each end; the bench should be perfectly level, as any inequality in the surface will alter the proportions of the mouldings upon the entablature, &c. The straps should be kept tight by means of wedges, in order that when the motion of the trough is reversed, the enrichments impressed upon the compost may not run into one another. When it is required to change the moulding-wheel, withdraw the trough from under it, take out the pin E, slide the upright (G) in the direction of the arrow, and then slip off the wheel. In placing another wheel upon the spindle, it may be found necessary to shift the nut (F) so as to get in the pin (E); when the latter is in its place, slide the wheel up to it, and screw tight the nut, the trough is then run underneath and suitable sized fillets put in to fill up the space.

Fig. 2.

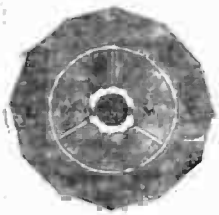


Fig. 3.

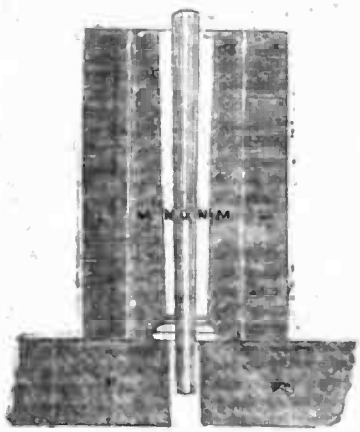


Fig. 2 shews the two cylinders for moulding columns; the one here represented as being in the mould, is, as you will perceive, of the Grecian Doric order, and presents no difficulties to its being done entire; but in such as the Corinthian, where the capitals are foliated, and the bases in some cases enriched, it would be better to mould base, shaft, and capital, in separate parts. The outer cylinder (L L) is in one piece, the sides about an inch thick and the inside bored through to receive the inner one (M M), which is in three pieces as shewn in Fig. 3. The papyrus compost (N N) is rolled round the iron spindle (O) placed in the mould or inner cylinder, and then compressed into all parts of it by driving down the spindle which is a little tapered for that purpose.

The column may be removed from the mould by turning the cylinders upside down, over another whose outside diameter is something less than M M; drive out the spindle, and then drive down the cylinder (L L); when about half off, lay hold of the inner one until they are clear, after which remove the three parts from the sides of the column.

Fig. 3 is a horizontal section of the cylinders, &c.

Where expense is not an object in the construction of an apparatus such as I have here described, a rack and pinion might be substituted for the straps; it could also be furnished with complete sets of moulding-wheels, &c. of the best examples of the ancient orders, of the various Gothic mouldings, and of any fancy ones, such as patterns for borders, cornices, &c., for rooms. Many designs for ornaments in various branches of the fine and useful arts may be engraved in the papyrus compost, and it may be, although I have not tried it for this particular purpose, made hard enough to be used in some cases as a substitute for wood engravings; perhaps it would be possible to increase its hardness (after being engraved upon) by a *slight* baking, so as to take impressions from it.

There is another purpose for which the compost would be very useful, namely, the engraving of patterns for small ornamental castings in metals; the facility with which it may be engraved is an important advantage, and it would also be superior to wood, as leaving a clearer impression in the mould.

The carving of groups of figures, flowers, &c. in relief would afford fine opportunities for exercising the taste and ingenuity of individuals; they could be coloured and framed like any other pictorial subject.

The kneading of the compost is of primary importance in some of the uses to which it may be applied. The two well-known articles, vermicelli and macaroni, are, I believe, prepared from wheat flour, and it is by incipient kneading that the proper degree of consistence is given to the paste, before it can be forced through the perforated plates; an examination of these articles will shew what may be done by kneading with one of the two ingredients in the papyrus compost.

The greater part of this communication being of a speculative nature, it cannot for that reason be of value, only so far as it may induce the creation of ideas in the minds of others. Your having attached considerable importance to the discovery of the papyrus compost, has induced me to trouble you again on the subject; at the same time it is left to your better judgment whether or not any part of it should be inserted in THE BUILDER; such publications should be vehicles for the diffusion of sound, practical information, and it is only under particular circumstances that any other should be admitted.

I am, Sir, your most obedient servant,

HENRY LIDDELL.

NEW ROYAL EXCHANGE.—This national edifice has advanced lately with giant strides, and grows more and more into the good graces of the citizens of London. The progress made is really astonishing. The facades on the north, south, and west sides, are so far completed that the great timber scaffoldings are partially removed, leaving only the carving and cleaning of the work remaining to be done. At the west end all the columns of the portico are in their places, and at the east end the first story of the tower is almost finished. The interior of the 'Change is arranged like the old one, with a large open area, and a covered walk. The area is altogether larger than the old Exchange, but different in form, and considered by the citizens in better proportion. The space covered by the walks is also greater. The internal area is arranged on the ground floor as an arcade, forming the covered walk. The arches are separated by Doric columns and pilasters. Over this is another story of Ionic columns, having arched windows between them. Over the windows are decorated and carved key-stones bearing the arms of the various kingdoms of the European family, marking the walks or districts to which the space below is appropriated. The masonry of this area is complete, with the exception of some of the carving. The approach to it from the east and west, under enormous arches, is, even in its present unfinished state, very striking and imposing.

Messrs. Adams and Fox, the extensive engineers at Old Ford, Bow, have taken the contract for building the aerial machine.

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